

Sample Haddon Matrix Applied to Motor Vehicle Crashes

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PHASES	FACTORS			
	Host/ Driver or Passenger	Vehicle/Vector <i>(objects that transmit kinetic energy)</i>	Physical Environment	Social Environment (Traffic Safety Culture)
Pre-Event (Before the crash occurs)	<ul style="list-style-type: none"> ➤ Driver vision ➤ Alcohol Impairment ➤ Driver experience/ ability ➤ Driver knowledge ➤ Restraint/ helmet choice ➤ Driver rested and attentive 	<ul style="list-style-type: none"> ➤ Maintenance of brakes and tires ➤ Speed of travel ➤ Load characteristics ➤ Anti-lock braking system (ABS) ➤ Electronic stability control (ESC) 	<ul style="list-style-type: none"> ➤ Adequate roadway markings ➤ Divided highways ➤ Roadway lighting ➤ Intersection configuration ➤ Road curvature ➤ Adequate shoulders and rumble strips 	<ul style="list-style-type: none"> ➤ Public / community attitudes on drinking and driving ➤ Impaired driving laws ➤ Graduated licensing laws ➤ Speed limits ➤ Enforcement and adjudication of traffic laws ➤ Support for injury prevention programs
Event (During the crash)	<ul style="list-style-type: none"> ➤ Spread out energy in time and space with seat belt/ airbag use ➤ Child restraint use 	<ul style="list-style-type: none"> ➤ Vehicle size ➤ Crashworthiness of vehicle- crash space, crush resistance, safety rating 	<ul style="list-style-type: none"> ➤ Guard rails, median barriers ➤ Presence of fixed objects near roadway ➤ Roadside embankments 	<ul style="list-style-type: none"> ➤ Adequate seat belt and child seat laws ➤ Motorcycle helmet laws
Post-Event (After the crash)	<ul style="list-style-type: none"> ➤ Crash victim's overall health ➤ Age of victim 	<ul style="list-style-type: none"> ➤ Gas tanks designed to minimize fires ➤ On-Star or other automated crash notification and GPS locator 	<ul style="list-style-type: none"> ➤ Availability of effective EMS systems and staffing ➤ Effective incident site management ➤ Distance to quality trauma care ➤ Rehabilitation programs available 	<ul style="list-style-type: none"> ➤ Policies and funding supporting emergency and medical response systems ➤ Public support for trauma care and rehabilitation ➤ EMS training ➤ Resources and programs for psychological recovery from trauma

Adapted from: Injury Prevention: Meeting the challenge. AJPM, 1989; Christoffel T. Gallagher S. Prevention and Public Health, Gaithersburg, MD. 1999